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TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT 68-01-6669

YPLSF

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6 September 1983
TAT-2343-01-10-F-00303

James C. Willmann
Environmental Protection Agency
1200 Sixth Ave., M/S 423
Seattle, WA 98101

Dear Jim:

Enclosed are the findings of the TAT review concerning eight National Priority List sites in Region X.

This is in accordance with the requirements of TDD #10-8308-02.

Respectfully,

Tom Johnson

Thomas L. Johnson
Region X TAT Leader

TLJ:tlm
Enclosure: as state
File Index: 8308-02

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Roy F. Weston, Inc.
SPILL PREVENTION & EMERGENCY RESPONSE DIVISION
In Association with Jacobs Engineering Group Inc., Tetra Tech, Inc., and ICF Incorporated

USDA - PESTICIDE EXPERIMENTAL LABORATORY

3706 West Nob Hill Boulevard
Yakima, WA

Site Description:

The USDA Pesticide Experimental Laboratory has been researching pesticides at this location since 1961. From 1961 through 1968, wastes generated by the laboratory were disposed of on the ground. In 1968, a septic tank and drain-field system were installed to dispose of unused mixed pesticides from spray application equipment, wastes from a mixing formulation laboratory, and rinse water from spray application equipment. USDA estimates that about 250 gallons of mixed pesticides and about 5,000 gallons of rinsate from the application equipment are injected into the septic tank system each year. Known chemicals injected into the septic system include: lindane, toxaphene, 2-4 D, methoxychlor, and silvex.

The geology of the area indicates a shallow aquifer (highest level of water table, 8-15 feet) overlain by cemented sand and gravel and a sandy gravelly loam with high permeability. The groundwater travels southeast towards the Yakima River. The aquifer is primarily used for irrigation but there are indications of domestic wells downgradient of the site.

More than 10,000 people live within 1 mile of the site and more than 55,000 people live within 3 miles of the site. The major concern at this site is the possibility of pollutants being carried offsite via the groundwater.

Work Done at the Site:

The EPA Region X Field Investigation Team (FIT) conducted a preliminary field investigation of the site on 24 June 1982. During the investigation, FIT dug several shallow holes south (downgradient) of the septic tank and tested

these holes for organic vapor. Volatile organics above background levels were detected in these holes and were suspected to be from the petroleum carrier solution mixed with the pesticides. In addition, a slight chemical odor was detected in the ambient air by the investigators.

In September 1982, FIT investigators returned to the site to install a well and sample the groundwater. The sampling team drilled to 20 feet and encountered no groundwater. No further drilling was performed.

Currently, Washington State Department of Ecology and the EPA are negotiating with USDA to perform soil and groundwater sampling at the site. USDA has declined to sign two Memorandums of Understanding from DOE and EPA to develop remedial action plans to cleanup the site. They did agree to take whatever action was necessary to resolve any problem that might be at the site.

Work Needed at the Site:

Soil and groundwater contamination at this site is suspected but unconfirmed. Due to the high probability of contamination of the drinking water aquifer, an extent of groundwater contamination survey is necessary. Domestic drinking water wells should be sampled first, to determine if drinking water contamination exists. Further groundwater sampling may be necessary, requiring the drilling of onsite and offsite wells. In addition, soil and surface water sampling are suggested to investigate other potential pollutant transfer mechanisms.

Since little investigative work has been performed at this site, an onsite assessment should be conducted. This assessment should be outlined in a written work plan describing the type and intensity of sampling needed to identify the problems at this site.

Potential for Immediate Action:

This site warrants immediate action. Since groundwater contamination is highly possible and there is evidence that domestic wells are located near the site, public drinking water may already be contaminated. Both the high soil permeability and high groundwater level contribute to the possibility of drinking water contamination. Other factors influencing the need for immediate action at this site include the large population living near the site and the toxicity and persistence of the suspected contaminants in the soil. In addition, the site is accessible to the public and poses a threat of exposure to any contaminants which may be in the top layer of soil.

Possible actions at this site include:

- Capping the septic tank and drainfield area with an impermeable layer.
- Excavating the septic tank and removing any contaminated soil in the drainfield.
- Provide alternate drinking water sources to the public if wells are determined to be contaminated.
- Institute a groundwater treatment program if the groundwater is determined to be contaminated.